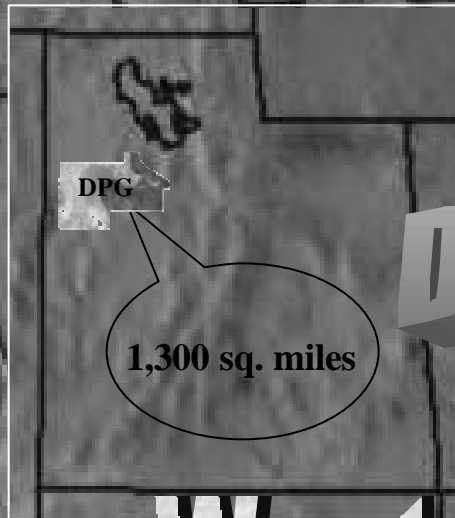


The Nation's Chemical and Biological Defense Proving Ground



**U.S. Army
Dugway Proving
Ground, UT**

West Desert Test Center

LTC David W. Coker,
(Represented by Vincent M. Liddiard, M.S.)

Commander, West Desert Test Center

Dugway Proving Ground

Dugway, UT 84022



Testing and Training, What the Warfighter Needs



- **Introduction to West Desert Test Center at Dugway Proving Ground**
- **Operational Testing and Training**
 - Capabilities of Operational Tests and Evaluations
 - 911- Bio ACTD
 - Rapid Lightning (Restoration of Operations)
 - Critical Air Cargo Contamination (CACC)
 - Global Patriot
- **How The West Desert Test Center at Dugway Proving Ground Can Provide Testing and Training Opportunities**
 - Test Facilities
 - Training Capabilities



**Testing & Training for
Readiness,
Effectiveness,
Suitability,
Survivability**





Mission



To test U.S. and Allied chemical and biological defense systems. Test smoke, obscurants, and illumination systems. Perform NBC survivability testing of defense materiel. Test environmental characterization and remediation technology. Act as the DoD joint Chem/BIO defense contact point in support of warfighting CINCs. Provide support to chemical and biological weapons conventions. Safeguard the environment. Operate and maintain an installation to support test mission.



The Nation's
Chemical & Biological
Defense Proving Ground

Testing & Training

**WDTC Relevancy
to the Department of
Defense**

**Conduct
Precision
Strikes**

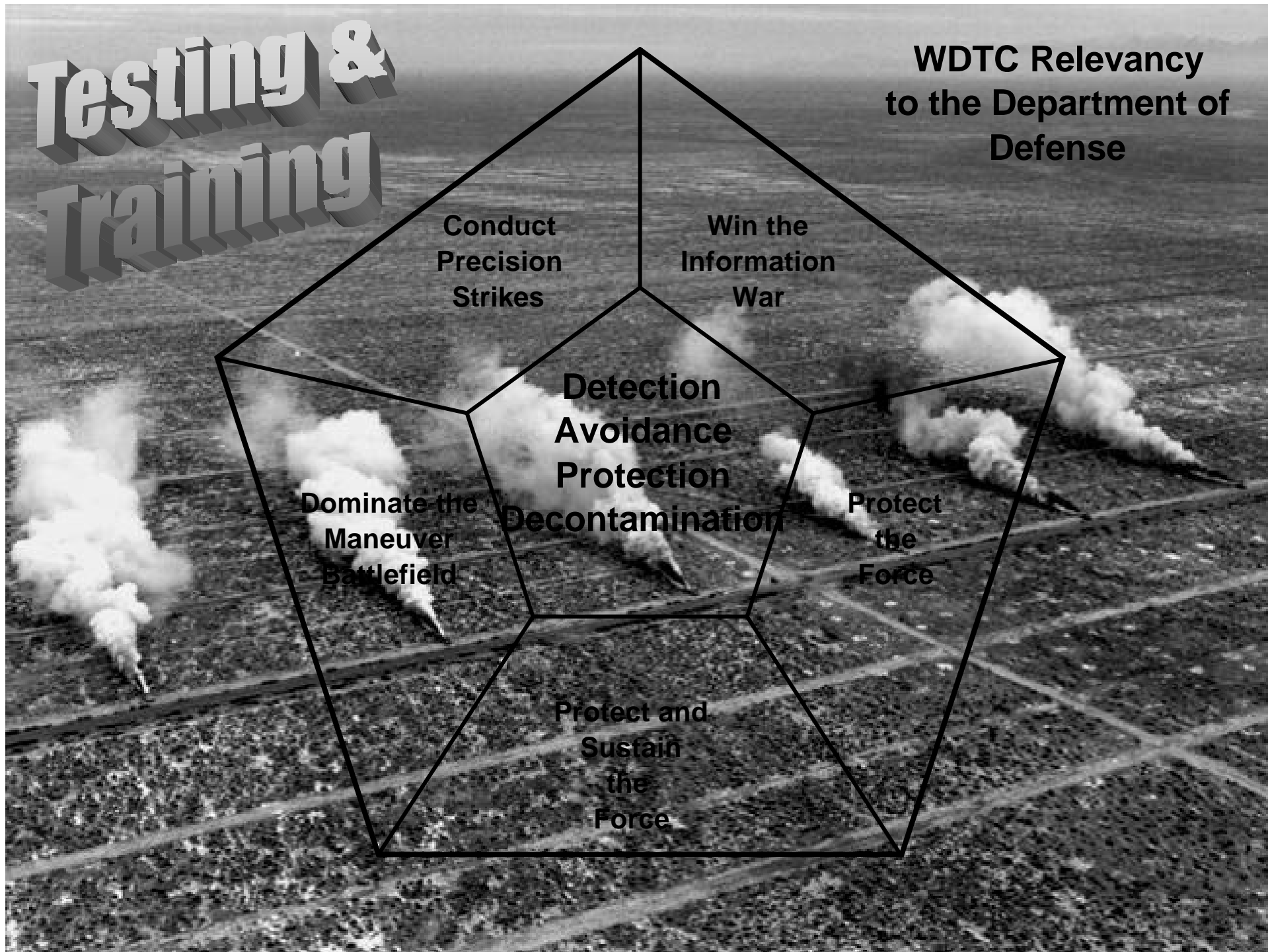
**Win the
Information
War**

**Detection
Avoidance
Protection
Decontamination**

**Dominate the
Maneuver
Battlefield**

**Protect
the
Force**

**Protect and
Sustain
the
Force**



Command Relationship

Army Materiel Command

MICOM

TACOM

STRICOM

TECOM

SBCCOM

BCDCOM

ATCOM

RTTC

ATTC

WSMR

YPG

APG

Dugway Proving Ground

WEST DESERT
TEST CENTER

BASE
SUPPORT

SPECIAL
STAFF

TENANT
UNITS

Program Analysis

NEPA Doc

Test
Operations

Life
Sciences

Chemical
Test

Met &
Obscurants

JCP

Contract
Support



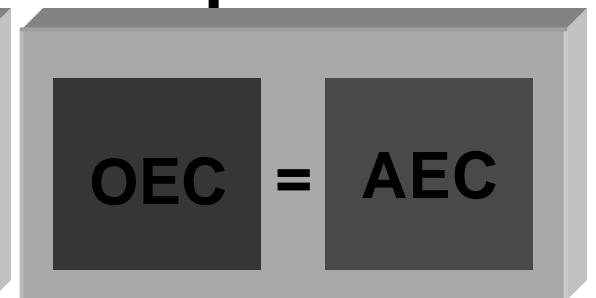
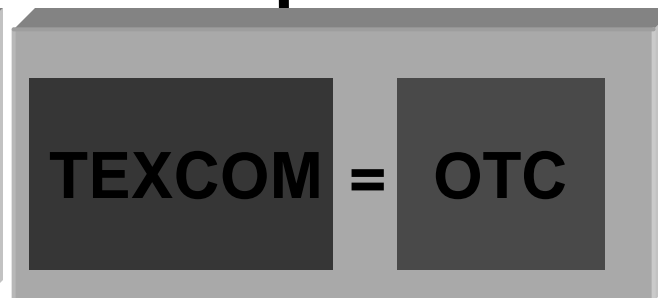
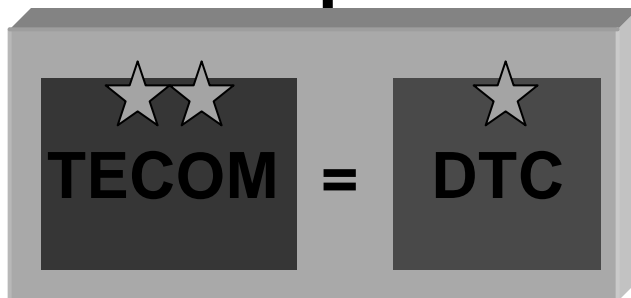
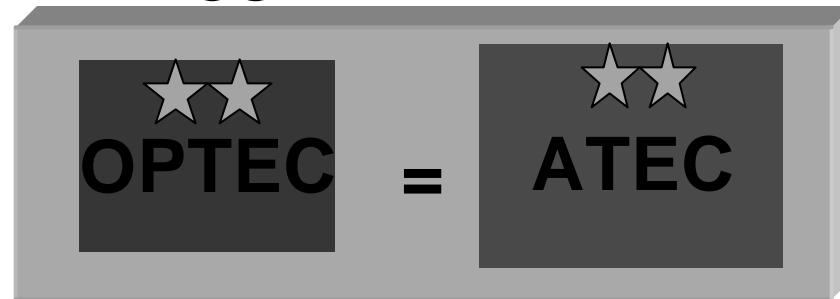
Army Test & Evaluation Command -- ATEC

VCSA - ★★★★★

AVCSA ★★★★★



30 Sep 99

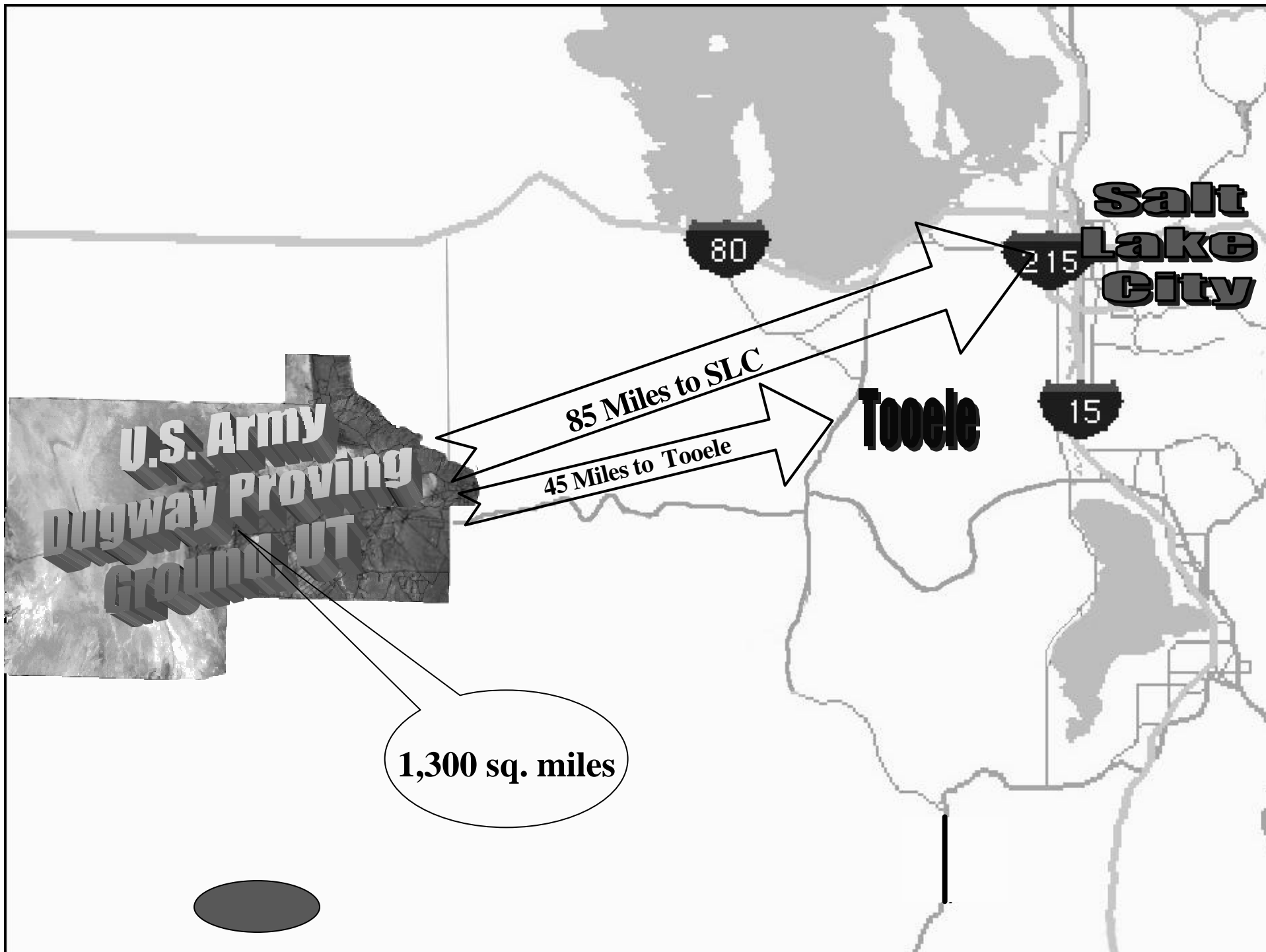


Dugway Proving Ground

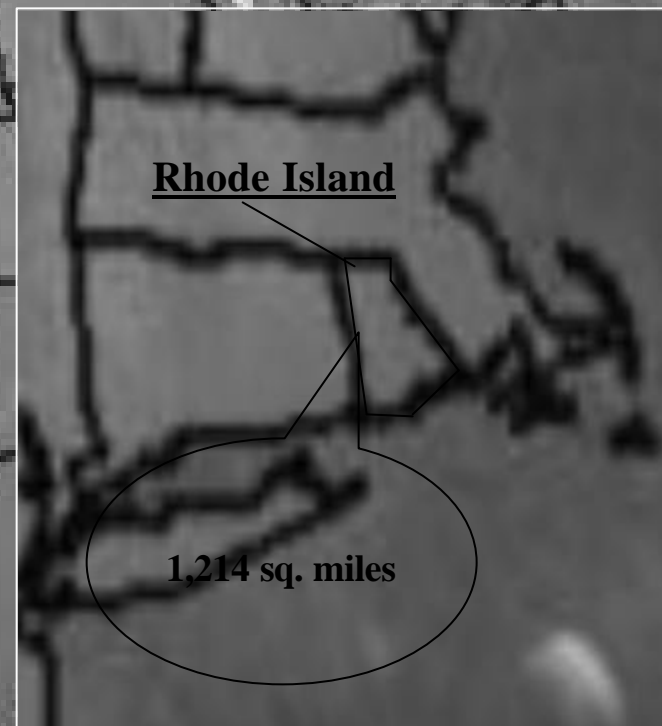
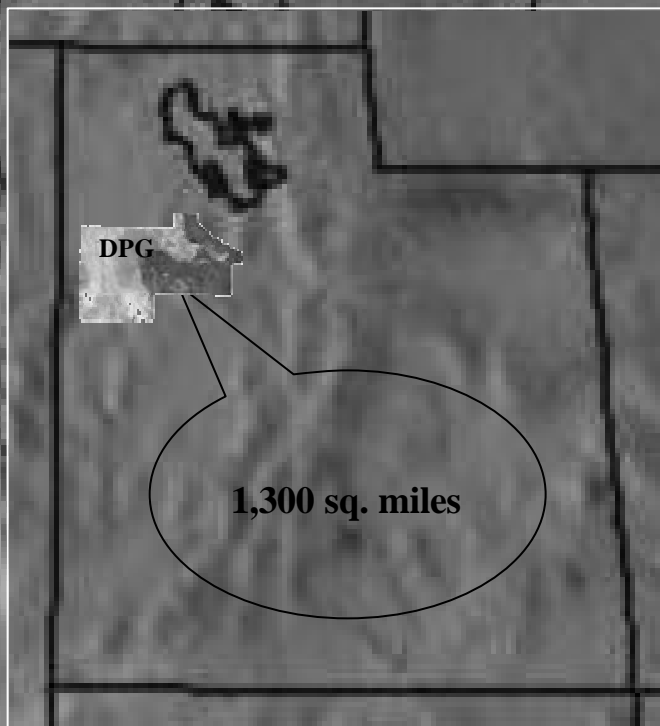
West Desert Test Center

Old

New



Area of Dugway Proving Ground



DPG Facts

Mission/environmental Compatible

~~No endangered species~~

– Environmental permits & documentation in place

• 70% of work force commutes

• Physical Assets

– 673 Buildings (2.6M Building Square Feet)

– 587 Family Housing Units

– 798,855 Acres

– \$548M Book Value

• 1,104 Total Work Force

• \$62.4M Total Annual Budget

– \$21.M Customer Revenue

– \$34.1M Installation

• Part of Utah Test & Training Range's 17,000 square miles (UTTR)

– Restricted airspace up to 58,000 feet





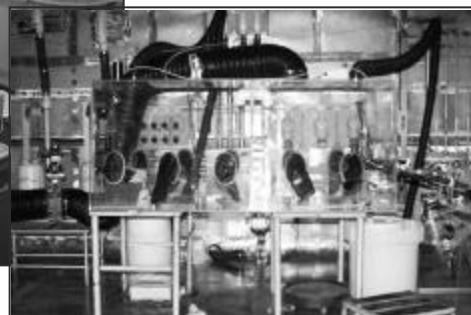
Chemical Test Facility



Capabilities



- **35,000 square feet of Multifunctional Chemistry Laboratories**
- **52 Fume hoods, 27 Surety-Capable Test Suites**
- **Supports Chamber & Field Testing of Actual Chemical Agents**
- **Soon to Include FBI C/B Weapons Forensic Lab**



Chemical Agents & Simulants

Agent

-G Agents
-VX
-H-Series
-Lewisite

Simulant

MeS
TEP, DeM
Acetic Acid
P- xylene



Life Sciences Test Facility



Capabilities

- **32,000 square feet of Multifunctional Biology Laboratories**
- **Only U. S. Facility Equipped to Test with Aerosolized BL 3 Agents**
- **3,500 sq. Biosafety Level 3 (BL-3) Containment Suites**
- **Aerosol Testing with Simulants, Pathogens and Toxins**



Agents of Biological Origin & Simulants

<u>Agent</u>	<u>Simulant</u>
VEE	E. herbicola
Bacillus anthracis	BG
Francisella tularensis	E. herbicola
Yersinia pestis	E. herbicola
Ricin (Toxin)	Ovalbumin
Mycobacteria	MS2



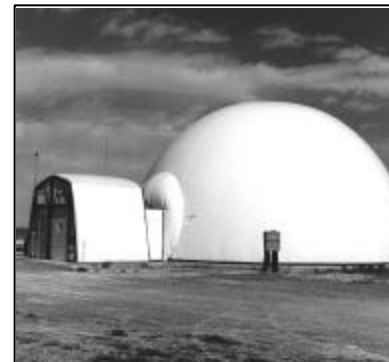


Test Chambers



Capabilities

- Stainless Steel Chamber (50'x50'x30')
 - C/B Vapors and Aerosols
 - Use Full Range of Chemical Agent/Simulant; Bio Simulant
- Full Environmental Control
- Live Chemical Agent Training
- MIST Testing
- Environmental characterization of explosive munitions



Operational Uses

- Perform Real Decontamination Operations
- Chemical Agent Training Facility
- Testing of C/B Defense Equipment Under Realistic Conditions



Operations Command & Control

- Centralized Voice/Data/Video Communications
- Link to VTC for Off-Site Integration
- Office Space for Staff
- Technical Library
 - Expert Research Staff
 - Over 58,285 Unclassified, & over 20,000 Classified Documents, 20,700 Microfiche
 - Documents from 1914 to present
- Multipurpose Control Center
 - Test Mission Support Facility
 - Training Facility
 - Support Team Training
 - Emergency Response Center





Range Communications



FIBER OPTIC NETWORK

- **32 Channels of Video**
- **7 Communications Consoles with 20 Radio Nets and Phone Patch**
- **Over 40 Comm. Drops**
- **Centralized Voice, Data & Video Communications in Mission Control Center**
- **Data Speed: 100 MB/sec**
- **Ethernet Connections**
- **Commercial Power to most Sites**

1,300 sq. miles



Michael Army Airfield



Capabilities

- Capable to handle all Army and Air Force aircraft (some weight & season restrictions apply)
- Fully lighted 13,125 ft runway with 650 ft overrun at each end
- 58,000 ft restricted airspace
- Aircraft Decon Pad
- 20,000 ft² hangar with office space and ground handling equipment

Operational Uses

- Tactical Air Operations
- C/B Decon of Aircraft
- Air-Assault Operations
- Air Resupply and Logistics



TEST & TRAINING GRIDS

Capabilities

- 1,300 sq miles of controlled access, multipurpose grid areas and facilities
- Communication Connections Available
- Full use of C/B Simulants
- Fiber Optic Links Available
- Live Fire Approved

Operational Uses

- Combat Maneuver Area
- Drop Zone
- Live Fire Authorized
- Reconnaissance Training
- Validate Tactics, Techniques, and Procedures for Desert Operations



Utah Training & Test Range (UTTR)

Capabilities

- *Largest Air Training area within the Continental U.S.*
- *Over 100 Training Sorties Conducted Daily*
- *Entire Inventory of U.S. Military Aircraft Train Here*
- *Full Instrument Coverage*
- *Live Fire Authorized*



- *16,651 sq miles 7,958 sq miles Restricted Air Space*
- *Restricted Air Space Below 58,000 ft*

Operational Uses

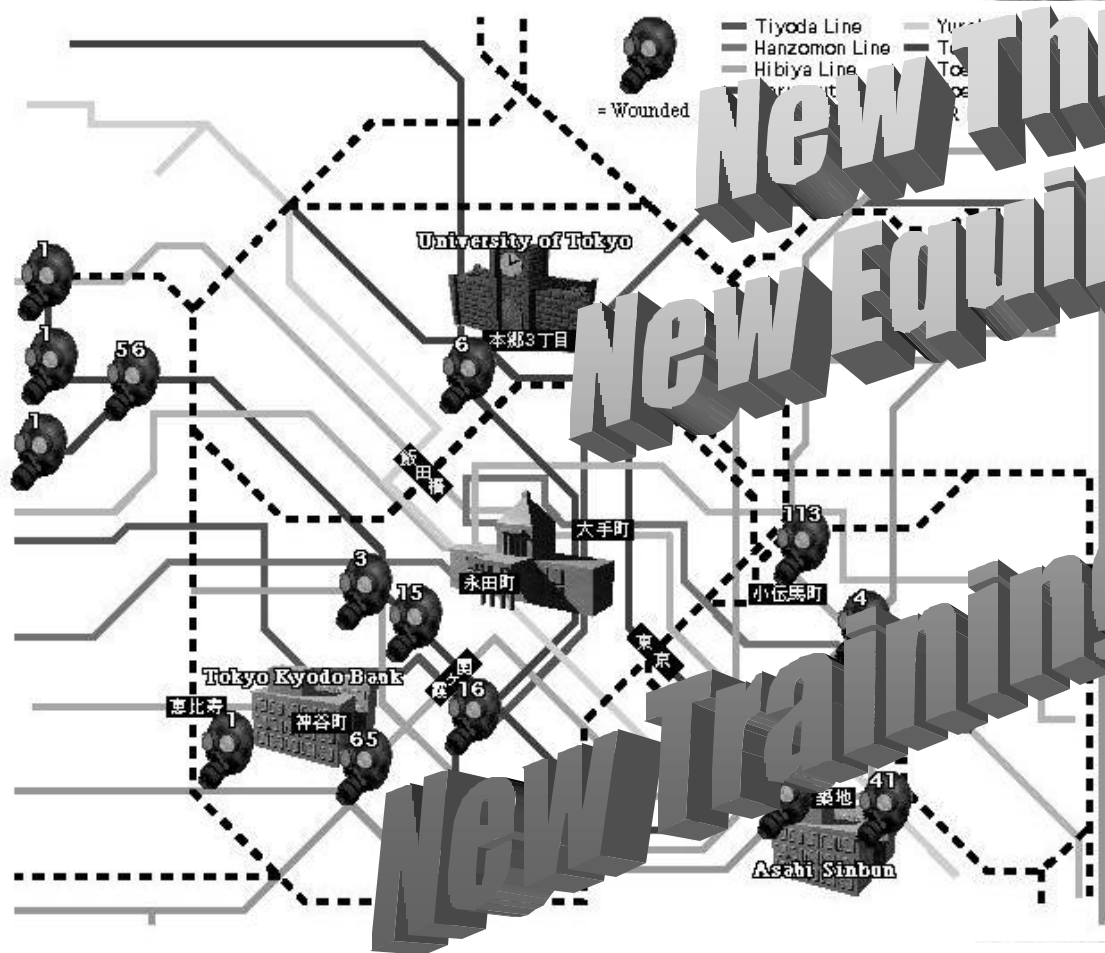
- *JAAT Training*
- *Air Defense Training*
- *Downed Air-Crew Rescue*
- *C/D Aircraft Decontamination*





Tokyo Terrorist Attack:

Aum Shinryko



12 Killed, Thousands Injured

Joint Contact Point DO 49

- Conducts C/B Operational Tests & Assessments
- Provides Operational Test & Assessment Reports
- C/B Technical Data Source Book Volumes
- Technical C/B Information
- Literature Search/Reviews
- Responds to Inquiries/Requirements CINCs & Services Through:
 - Literature Searches
 - Technical Assessments
 - Laboratory & Field Testing
- DOD Repository for CB Technical Information (JTIC)



Operational Testing Experience



- **911-BIO ACTD**
- **Cargo Aircraft Contamination Control**
- **Multi-System Field Exercises**
- **International Demonstrations/Evaluations**
- **Chemical Accident/Incident Response & Assistance (CAIRA) Exercises**
- **Helicopter Agent Transfer**
- **Vehicle/Roadway Agent Transfer/Transport**
- **Hospital Ship Ventilation/Filtration**
- **Re-Aerosolization**



911 Bio Consequence Management ACTD

- **Purpose:** To Test and Demonstrate Emerging Technologies under a realistic environment of Federal, State, and Local involvement. To verify Command and Control, Unit /agency integration, and Communication

- **Participants:**

- Chem/Bio Incident Responder Force (CBIRF)

- Technical Escort Unit (TEU)

- State and Federal Representatives from the U.S. Response

- **Benefits:**

- Achieve Early user / Assessment of requirements for technologies for

- Domestic use

- Military Utility Evaluation DoD Federal/State/Local Response

- Modeling and Simulation





Rapid Lightning Operational Test



- **Purpose:** To allow US Army TEU, USMC CBIRF and FBI to refine CONOPS and sample in a BW terrorist laboratory environment. This is a follow-on to the 911-BIO ACTD under the RestOps ACTD umbrella.
- **Participants:**
 - Chem/Bio Incident Responder Force (CBIRF)
 - Technical Escort Unit (TEU)
 - FBI
- **Benefits:**
 - Real life setting for an Operational Exercise
 - Hands on experience with non pathogenic Agents of Biological Origin.





Cargo Aircraft Contamination Control (CACC) Field Test



Purpose: Evaluate the effectiveness of AMC contamination control procedures for operating in a chemical environment

Participants:

- 75 US Air Force
- 30 WDTC

Requirements:

- Cargo Aircraft Contamination Control
- Equipment Contamination Control
- Aircrew, PAX, Patient, & Cargo loading
- Two-hour in-flight vapor purge
- C-141B interior decontamination

- **Sampling:**

- Vapor
- Deposition
- Liquid Transfer

- **Dissemination:**

- MeS at 5 g/m²
- Spray boom & SPALs



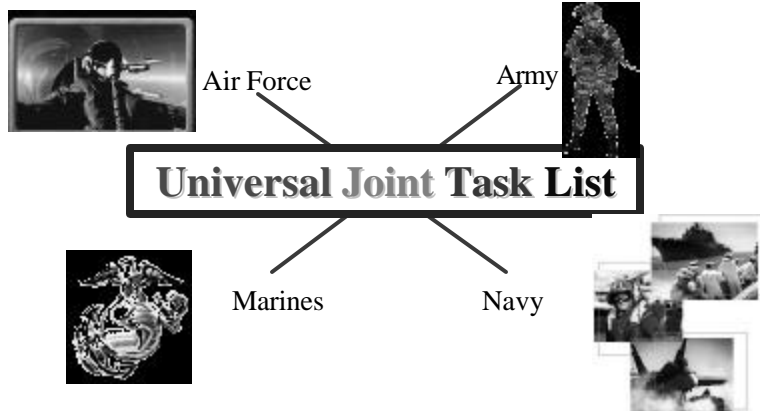
Global Patriot 1999

Purpose: Live Fire Exercise integrating the Reserve Forces of Air Force, Army, Navy & Marines into a Coordinated Real World Experience

Participants: Reserve and National Guard of all DoD services throughout the country

Benefits: Live Fire Exercise Simulating an Actual Warfighting experience

Maximize Joint Training Opportunities



How DPG Meets the Warfighters Need For Testing & Training

C/B Experts in Testing, 1,300 sq. miles of
Remote, Controlled Access Real-estate

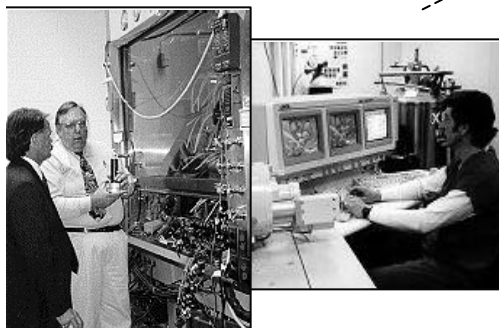
Support Contracts
In Place



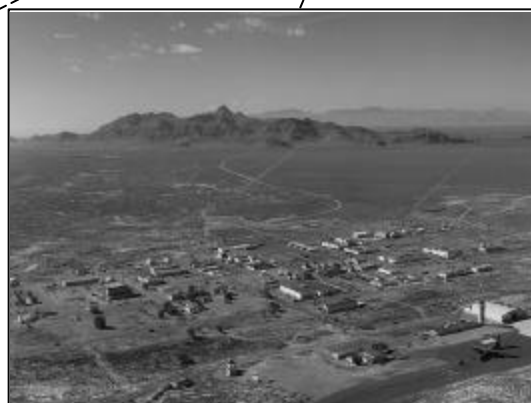
Meteorology & Obscurants



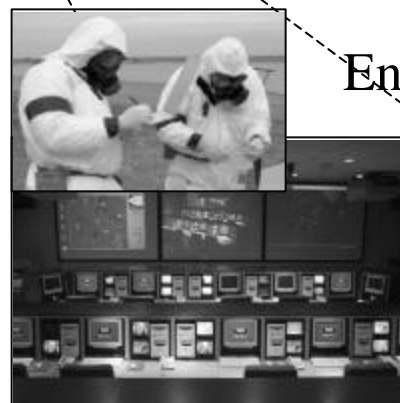
Infrastructure In Place
State of art Equipment &
Instrumentation



Expert Work Force,
Independent Evaluators



Remote C/B Testing
Since 1940's



State of Art Command
Control Capability



Airfield On-Site



Vast Areas of Live
Fire/Simulant Training



Environmental Permits



Working Relationships
USAMRID,
CHPPM, OPTEC,
MARSYSCOM, AFOTEC

An aerial photograph of a vast, arid desert landscape. In the foreground and middle ground, there are various structures, roads, and what appears to be a training area. In the background, a range of rugged mountains is visible under a clear sky. The overall tone is professional and military-oriented.

Summary

- **Operational Testing and Training Tailored to Customer Needs**
- **Operational Validation of Tactics Techniques and Procedures**
- **Equipment Validation**
- **Realistic Scenarios for Training**
- **Environmental Characterization of Explosives and Munitions**
- **Ground Truth Data and Evaluation of Equipment & Procedures**
- **Airfield Support**
- **Environmental Permits in Place for Simulant and Agent Use**
- **Over 50 Years of Experience in the C/B Arena**
- **Drop Zones, Live Fire Sites, C/B Simulant Use, Logistics Support**
- **Chem/Bio Training with C/B Simulant and Live Fire Scenarios**
- **National Proving Ground for Chemical and Biological Defense**